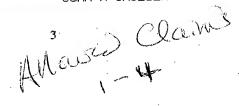
AMENDMENT S/N:09/460,107, FILED 12/13/99



PATENT 130-139

30. An apparatus for performing a reagent protocol using polymerase chain reaction, comprising:

(a) means to index parterns of reagent wells on a continuous basis through at least one step of reagent addition to said reagent wells;

(b) means to index said patterns of reagent wells on a continuous basis through a plurality of individual heat transfer stations, whereby at each of said individual heat transfer stations, said patterns of reagent wells are subjected to a unique temperature change to cause one amplification step, with said plurality of individual heat transfer stations providing total amplification required for said protocol;

(c) means to seal said reagent wells following said at least one step of reagent addition to said wells; and

(d) separate heat exchanger compartments can be clamped to a lower surface of a thermoplastic web containing said patterns of reagent wells to form a liquid tight seal around individual said patterns of reagent wells.

An apparatus, as defined in Claim 36, further comprising means to cause heat exchange fluid to flow through each of said separate heat exchanger compartments for specific time controlled periods.

Please insert the following new Claims 29-32.

An apparatus for performing a reagent protocol using polymerase chain reaction, comprising:

(a) means to index patterns of reagent wells on a continuous basis through at least one stop of reagent addition to said reagent wells;

(b) means to index said patterns of reagent wells on a continuous basis through a plaintity of individual heat transfer stations, whereby at each of said individual heat transfer stations, said patterns of reagent wells are subjected to a unique temperature change to cause one amplification step, with said plurality of individual heat transfer stations providing total amplification required for said protocol; and

(c) means to seal said reagent wells following said at least one step of reagent addition to said wells, wherein said patterns of reagent wells are sealed to provide a liquid tight but peclable seal as provided by pressure sensitive adhesive or heat seal methods.

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An apparatus for performing a reagent protocol using polymerase chain reaction, comprising:

- (a) means to index patterns of reagent wells on a continuous basis through at least one step of reagent addition to said reagent wells;
- (b) means to index said patterns of reagent wells on a continuous basis through a plurality of individual heat transfer stations, whereby at each of said individual heat transfer stations, said patterns of reagent wells are subjected to a unique temperature change to cause one amplification step, with said plurality of individual heat transfer stations providing total amplification required for said protocol;
- (c) means to seal said reagent wells following said at least one step of reagent. addition to said wells; and
- (d) means to peel sealing material from a top of said thermoplastic web to provide access to said reagents by a single or multiple well pipettor, said means to peel including a heared pressure roller in contact with said sealing material to apply a line of hear across said thermoplastic web to soften bonding of said sealing material to said thermoplastic well to permit ease of removal by applying tension to said sealing material.